

# Campo Natural Products

## New Cosmetics Ingredients from Rainforest Plants

### RAINFOREST BOTANICAL EXTRACTS & EXOTIC OILS



#### **CAMPO RESEARCH PTE LTD**

Level 30, 6 Battery Road, Singapore 049909

Tel: (65) 63833203 / 202 / 63833631

Direct Fax (65) 63833632 / 63834034

Email: [sales@campo-research.com](mailto:sales@campo-research.com) Website: <http://www.campo-research.com>

CAMPO® Multi-Purpose Cosmetic Base Chemicals & Active Ingredients

CAMPO® Novel Functional Active Cosmetic Ingredient & Raw Materials

# AMAZON RAINFOREST

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Ask about our Herbal Natural Products Chemistry Consultancy Services – Product Registration EEC/UK New Drug Development (NDA-US); Quasi-Drug Topicals (MOHW\_Japan); Development of Standards, Analysis & Profiles of Phytochemicals; Literature searches, Cultivation of Medicinal Plants, Clinical-Trials, Development of new uses for Phytochemicals and Extracts; Contract Research and Development Work in Natural Products for Novel Drugs, New Cosmetic Active Ingredients for Active Topica/OTC Cosmetic with functionality and Consumer-perceivable immediate-results, New Food Ingredients for Nutraceuticals & Functional Foods.

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**CAMPO RESEARCH**  
ACTIVE INGREDIENTS

24 hrs. campo@pub1.jp.vocaltec.com support@campo-research.com

Campo Novel Active Cosmetic Ingredients. The Ingredients That Impart Consumer Perceivable Functional Activities To Your Cosmetic End Products !!!

## AMAZON RAINFOREST

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<a href="#">Tucuma</a>	<i>Astrocaryum tucuma</i> Mart.
<a href="#">Urucum</a>	<i>Antrocaryum amazonicum</i> (Ducke) Burt

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Ask about our [Herbal Natural Products Chemistry Consultancy Services](#) – [Product Registration EEC/UK New Drug Development \(NDA-US\)](#); [Quasi-Drug Topicals \(MOHW\\_Japan\)](#); [Development of Standards, Analysis & Profiles of Phytochemicals](#); [Literature searches, Cultivation of Medicinal Plants, Clinical-Trials, Development of new uses for Phytochemicals and Extracts](#); [Contract Research and Development Work in Natural Products for Novel Drugs, New Cosmetic Active Ingredients for Active Topica/OTC Cosmetic with functionality and Consumer-perceivable immediate-results, New Food Ingredients for Nutraceuticals & Functional Foods.](#)

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# AMAZON RAINFOREST

## NEW COSMETICS INGREDIENTS FROM THE WORLD

### INTRODUCTION

We are about to begin a journey of exploration to the last great wilderness of the world. The tropical rainforests stretch around the equatorial regions of the world like lush, green rings of Saturn, through Africa, around Indonesia, Borneo, Sarawak, Northern Australia and of course across South America, Amazonia, the last great unknown tracts on this planet. What secrets do they hold these hot, humid, expanses? Perhaps cures for some of today's killer diseases.... Perhaps! Perhaps some new, novel functional cosmetics ingredients.... Perhaps!

But will they be discovered before it is too late, before man's greed has decimated the forests beyond recovery and robbed future generations of their bounty? Before so many other species disappear like the beautiful blue qualea and a hundred and one other unique plants. Consider that in 1987, 80,000 square miles, five times the area of Switzerland was fired during the three month burning season. Just what are we losing forever?

### ETHNOBOTANY

Let us now begin by considering what the rainforests have given man so far. I guess the ubiquitous banana and guava might reasonably be considered rainforest fruit, perhaps coffee at a stretch. But let us look a little more closely at what the local Indians have found to use from the plethora of exotic plant life that is their greenhouse home.

This kind of study is called ethnobotany and it is interesting that many of today's prescription drugs were developed from a study of the ethnic usage of local plants. It is a fact that there are 121 prescriptive drugs used throughout the World today that comes from following up local native usage. There is abundant evidence that the peoples of the tropical rainforests, as with tribes from all around the World, have acquired sufficient knowledge to utilise local plants as part of their primary health care regimen for thousands of years. But perhaps before we move forward we should take a further step backwards and consider how it is that these simple forest dwellers learned which plants had beneficial effects.

Maybe they had studied the local animals and their habits; we now give this topic the grandiose name of zoopharmacognacy. There are many examples, particularly of primates, using the herbs for their therapeutic effects. For example, muriqui monkeys feed on a fruit rich in compounds that promote progesterone production and thence ovulation. Chimpanzees use the leaves of *Aspila* species as anthelmintics. Recent studies, with the benefits of all the modern hardware and analytical tools of a 20th century laboratory, have discovered that these leaves are rich in a group of compounds called thiarubines. One of these, thiarubin A, perhaps not surprisingly, is showing promise as a nematode.

In the rainforests of Borneo the local tribesmen, the Dayaks and Iban, have studied orangutans chewing the leaves of certain vines during the rainy season and then rubbing the spittle on their chests. Is this a rainforest "Vicks"? Quite simply, the answer is yes!

*Old drugs...*

There are many cases of pharmaceuticals currently in use that originated in the rainforests. Perhaps the best known of these is *Cinchona officinalis*, the source of the anti-malarial alkaloid, quinine. The bark of the trees was originally collected from the high rainforests of

the Andes where it had been known in the local dialect as "quina-quina", bark of barks, and enjoyed a reputation for curing many fevers. It became so successful that its over-harvesting created what was undoubtedly the first conservation crisis for a medicinal plant, almost bringing about the demise of the species in its natural habitat. It seems that only by transferring germ plasm to new plantations in India, Sri Lanka and South East Asia was the species saved from long-term genetic impoverishment and possible extinction.

Ipecacuanha is another medicine of Brazilian rainforest origin. It is extracted from the dried rhizome and roots of the *Cephaelis* of *Uragoga ipecacuanha* (Brot), members of the Rubiaceae family. Depending on variety and source the roots contain approximately 2% to 3% of total alkaloids of which emetine and cephaeline are the most prominent. Ipecacuanha is a well-known emetic.

In addition to the positive benefits of plant drugs, the local Indians also gained knowledge of more malevolent species. This may be instanced by the use of the poison extracted from the wourali root (*Strychnos toxifera*) and locally known as curare. This was applied with great effect to the tips of arrows and blow darts. Interestingly, the highly toxic alkaloids that act as paralyzing poisons are now forming the basis of a new class of muscle relaxant drugs for use during the major surgery.

#### *Hallucinations and quick lifts.....*

The feiticeiros, or Shamans of the Waika or Yanomamo Indians, who live in the high forests of the Venezuelan - Brazilian border, use a snuff, known as parika, prepared from the powdered bark of the virola tree and sucked into the nostrils through bamboo tubes during certain religious ceremonies in order to bring about a state of euphoria.

Also used by South American Indian Shamans, as a hallucinogen during religious ceremonies is *Brugmansia suaveolens*, a plant closely related to the *Datura* species, members of which have been traditionally used around the World for their psychotropic effects. More recently *Datura* has been grown commercially in South America as a source of the alkaloid, hyoscyamine.

Gaining in popularity in the sophisticated cities of the Western World is a product called guarana? This started to be popular in the late eighties at nightclubs where it was sold in capsules behind the bars to give a quick lift. A cloak of respectability now covers the herb with capsules being sold in retail chemists' chains. It has also now found its way into several designer health and tonic drinks such as Rio Amazon Guarana "Jungle Elixir" marketed through health shops.

Guarana, *Paullinia cupanan*, is a lian-like vine that grows widely in the Amazon rainforest and has been cultivated in certain areas for many years, particularly around Luzea, near the River Maues. This stout, twining plant produces black seeds twice a year, in March/April and again in October/November. The seeds are pounded and roasted and then made into hard, chocolate colored sticks. These are then powdered when needed, mixed with water and drunk as a "tea". It was reported that the Brazilian botanist, Adolpho Ducke, could spend great amounts of time in the Amazon forests sustained solely by guarana. It has been likened to a rainforest ginseng, but this is not necessarily correct... if needed, a rainforest ginseng actually exists, as we shall see later.

The main active ingredients of guarana have been identified as tetramethylxanthine or guaranine, which on roasting is believed to convert to trimethylxanthine, or caffeine, a well-established stimulant.

*...And new*

There is now much work being carried out to screen rainforest plants as sources of potential cures for 20th century diseases. Shaman Pharmaceuticals, of San Carlos, California are in the forefront of this research and have initiated collaborative projects with certain Indian tribes such as the Waorani Indians of the Ecuadorian Amazon.

Their success may be measured by the fact that they have brought to Phase 1 human clinical trials a new anti-virus drug, SP-303 ("Provir") within 16 months. The source plant had been used traditionally to treat diarrhea, pulmonary problems, cuts, skin irritations, rheumatism, tonsillitis, tuberculosis, coughs and flu, haemorrhoids, sore muscles and as a contraceptive. Successes breeds success, and in order to protect the rainforest from over-harvesting and to make certain that there is not a repeat of the disaster that very nearly overtook the cinchona species, Shaman Pharmaceuticals has formed the Healing Forest Conservancy. This is a non-profit making organization whose charter is to maintain medical plant biological diversity and to provide a structure whereby a portion of the profits generated from commercialization of plant derived compounds can and will be distributed to countries that participate in plant collection and other collaborative activities.

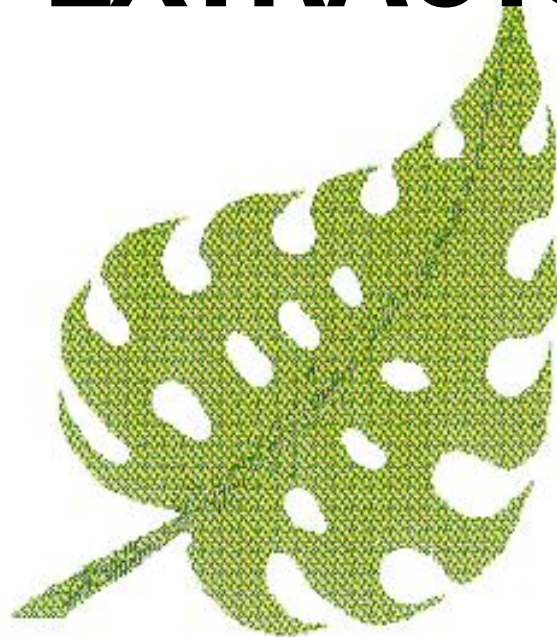
So, medicinally speaking, I think we have sufficiently modern confirmatory evidence to see that the local tribes have acquired significant amounts of detailed information on the therapeutic effects of the local flora. However, unlike the Chinese, these herbal cures have not been recorded for thousands of years in the form of herbal pharmacopoeia or formularies. Indeed, the forest published herbal pharmacopoeia of the New World was the so-called Badiano manuscript of 1552. Originally in the Aztec language, Nahuatl, Juan Badiano, an Indian from Xochimilico, translated the work into Latin. There is, however, archaeological evidence that links the Amerindians with the medicinal, ceremonial and cosmetic use of herbs for thousands of years before this important manuscript appeared, but virtually all of this knowledge is only being passed down by word of mouth by successive feiteiros within each tribe.

Just as the Amerindians traditional use of herbs for their primary health care regimen has in many cases now been verified by contemporary pharmacology, so the plethora of fruit, seeds, roots and leaves used for native cosmetics applications are now finding functional use in contemporary cosmetics and toiletries formulations.

A selection of these is described in the following pages. All of them are now available as high quality hydroglycolic extracts for ease of incorporation into cosmetics and toiletries formulations. For each one, a brief ethnobotanical survey is given detailing the native use of the plant; this being followed by details of the functional ingredients found in the extracts and the benefits they impart to your formulations. All of the species used are either custom wild crafted or organically cultivated in natural rainforest, with all care being taken to make certain there is no detrimental impact on their natural environment. None of the plants are subject to contamination by pesticides or fertilizers and none of the extracts have been tested on animals.



# RAINFOREST EXOTIC BOTANICAL EXTRACTS



**On Custom - Request:**

CAMPO Custom Extraction Service for new  
Novel Exotic Rainforest Botanicals for Novel Cosmetics.  
**Contact Tel: (65) 63833203 Fax: (65) 63834034**

**Latest Up-date:**

The latest molecular knowledge of UV protection mechanism of plants from the tremendous amount of Solar UV rays is now better understood and the functional active principle(s) “Enzymes” (trade name: UVzymes™) involved is meticulously isolated, extracted and incorporated in all of Campo’s range of Plant Extracts including this range of Rainforest botanical extracts.

**Campo Research, Singapore.**

## **RAINFOREST BOTANICAL EXTRACTS**

Rainforest Extracts - alphabetical by Latin Name

Local name	Latin name	ITS	RTS	RSS	OGS	ADS	SSS	DBH	OGH	DIS	NSH	SRB	SSB	UV A&B
murumuru	Astrocaryum murumuru M			+	+				+		+			<b>+SPF19</b>
tucuma	Astrocaryum tucuma Mart	+	+	+	+				+					<b>+SPF14</b>
pejibaye	Bactris gasipaes Kunth	+							+				+	<b>+SPF24</b>
brazil nut	Bartolletia extract H.B.K			+	+				+		+	+		<b>+SPF12</b>
puruf-grande	Borojoa sorbilis (Huer)						+							<b>+SPF14</b>
manga-ice	Echitea glauca R & S	+		+	+				+				+	<b>+SPF10</b>
yuyu chonta	Euterpe precatória Martius	+	+	+							+			<b>+SPF9</b>
curucuda	Gnetum amazonicum Tul	+	+				+					+		<b>+SPF19</b>
jatoba	Hymenacea courbaril L	+	+	+			+					+		<b>+SPF15</b>
inga	Inga edulis Mart.	+		+		+				+	+		+	<b>+SPF24</b>
carana	Mauritella armata Burret	+	+	+										<b>+SPF23</b>
Muruity-muruity	Mauritia flexosa L.f.	+	+	+					+		+			<b>+SPF17</b>
Huacava	Maximilliana regia Martius	+	+	+							+	+		<b>+SPF9</b>
aprianga	Mouriri apiranga Spruce			+		+				+	+	+		<b>+SPF14</b>
suma	Pfaffia spp.			+	+				+				+	<b>+SPF30</b>
ginja	Stenocalyx michalii (Lam.)		+	+	+				+	+		+		<b>+SPF21</b>

**Decode for therapeutic categories:-**

- |  |   |
|--|---|
| ITS - invigorating and tightening slack skin                             | DBH - against dry, brittle hair conditions                      |
| RTS - regeneration of tired, reddened skin                               | OGH - against greasy (excessive oil secretions) hair conditions |
| RSS - revitalisation and strengthening of the skin                       | DIS - against dandruff and itchy scalp                          |
| OGS - against oily or greasy skin conditions                             | NSH - for normal hair and scalp                                 |
| ADS - against dry skin conditions  | SRB - for soothing/relaxing baths                               |
| SSS - against sunburn and sunburned conditions                           | SSB - for stimulating/invigorating baths                        |
| <b>UV A&amp;B - sun protection factor / UV A&amp;B filter/absorbtion</b> |   |



## RAINFOREST BOTANICAL EXTRACTS

### Rainforest Extracts - alphabetical by Local Name

Local name	Latin name	ITS	RTS	RSS	OGS	ADS	SSS	DBH	OGH	DIS	NSH	SRB	SSB	UV A&B
aprianga	Mouriri apiranga Spruce			+		+				+	+	+		<b>+SPF14</b>
brazil nut	Bartolletia extract H.B.K			+	+				+		+	+		<b>+SPF12</b>
carana	Mauritella armata Burret	+	+	+										<b>+SPF23</b>
curucuda	Gnetum amazonicum Tul.	+	+				+					+		<b>+SPF19</b>
ginja	Stenocalyx michalii (Lam.)		+	+	+				+	+		+		<b>+SPF21</b>
Huacava	Maximilliana regia Martius	+	+	+							+	+		<b>+SPF9</b>
inga	Inga edulis Mart.	+		+		+				+	+		+	<b>+SPF24</b>
jatoba	Hymenacea courbaril L	+	+	+			+					+		<b>+SPF15</b>
manga-ice	Echitea glauca R & S	+		+	+				+				+	<b>+SPF10</b>
Muruity-muruity	Mauritia flexosa L.f.	+	+	+					+		+			<b>+SPF17</b>
murumuru	Astrocaryum murumuru.M			+	+				+		+			<b>+SPF19</b>
pejibaye	Bactris gasipaes Kunth	+							+				+	<b>+SPF24</b>
puruf-grande	Borojoa sorbilis (Huer)						+							<b>+SPF14</b>
suma	Pfaffia spp.			+	+				+				+	<b>+SPF30</b>
tucuma	Astrocaryum tucuma Mart.	+	+	+	+				+					<b>+SPF14</b>
yuyu chonta	Euterpe precatoria Martius	+	+	+							+			<b>+SPF9</b>

#### Decode for therapeutic categories:-

ITS	- invigorating and tightening slack skin	DBH	- against dry, brittle hair conditions
RTS	- regeneration of tired, reddened skin	OGH	- against greasy (excessive oil secretions) hair conditions
RSS	- revitalisation and strengthening of the skin	DIS	- against dandruff and itchy scalp
OGS	- against oily or greasy skin conditions	NSH	- for normal hair and scalp
ADS	- against dry skin conditions	SRB	- for soothing/relaxing baths
SSS	- against sunburn and sunburned conditions	SSB	- for stimulating/invigorating baths
<b>UV A&amp;B</b>	<b>- sun protection factor / UV A&amp;B filter/absorbtion</b>		

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT #9301/AP**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name: (Campo Research)	CAMPO APIRANGA HYDROGLYCOL EXTRACT	
Other Trade Names (CampoResearch):	APIRANGA EXTRACT	
CTFA TRADE NAME (Proposed):	CAMPO APIRANGA	
Existing CTFA/INCI Name:	Mouriri apiranga Spruce ex Triana	
CAMPO PRODUCT #:	9301/AP	
CAS#:	N/A	
EINECS#:	N/A	
EINECS Name:	N/A	
English name:	Apiranga	
Local name:		
Reference literature:		
Active substances:	Flavonoids	Circulation stimulating
	Polysaccharides	Hydration
	Amino acids	Tightening
	Pro-cactin complex	Circulation stimulant
	UVzymes™	UV absorber

**Ethnobotany:**

**The Cerardo tribes in hair use Apiranga** and face washes in rituals conducted during the close of the dry season. The effect is believed to increase resistance to adverse environmental factors and to improve the elasticity of the skin.

**Applications and dosage recommendations:**

**Apiranga** contains a unique compound pro-cactin, which has been shown to exhibit circulation-stimulating activity similar to Cactin extracted from *Cactus grandiflorus L.* The pro-cactin exhibits extraordinary properties in many cosmetics formulations. It is recommended for all skin care products as well as for hair care formulations, including shampoos, rinses and conditioners. The action of the flavonoids, the moisturising properties of the polysaccharides and the tightening effects of the amino acids support the activity of the pro-cactin.

For skin care preparations	1 - 3%
For hair care preparations	3 - 5%

**Application codes: AD, RSS, DIS, DBH, NSH, SRB, SPF UV A&B**

SPECIES	Mouriri apiranga Spruce ex Triana Syn: Mouriri apiranga Spruce ex Triana
PARTS USED	Fruit

RAW MATERIAL - ORIGIN

SOUTH AMERICA

CONCENTRATION

1kg extract = 52.5 kg Apiranga fruit

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light yellow brown	Visual
Odour	Odourless	Oil Factory
Specific Gravity (20deg.C)	1.010-1.050	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.350- 1.410	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	-
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 Cfu/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 Cfu/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.10 ppm	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted herb.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.

**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9302/BN**

## **SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

### **PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name: (Campo Research)	CAMPO BRAZIL NUT HYDROGLYCOL EXTRACT	
Other Trade Names: (CampoResearch)	Brazil Nut Extract	
CTFA TRADE NAME:	CAMPO BRAZIL NUT	
Existing CTFA/INCI Name:	Brazil Nut (Bertholletia Excelsa)	
CAMPO PRODUCT #:	9302/BN	
CAS#:	N/A	
EINECS#:	N/A	
EINECS Name:	N/A	
English name:	Brazil nut	
Local name:		
Reference literature:		
Active substances:	Essential oils	Soothing
	Saponins	Softening
	Carotenoids	Granulation promoting
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	Tannins	Astringent
	UVzymes™	UV absorber

### **Ethnobotany**

There is a well-documented use of **Brazil nut**, particularly the oil, by several Indian tribes Amazonia, for hair care.

### **Applications and dosage recommendations:**

The soothing effects of the essential oils extracted from Brazil nut flowers makes a wonderful addition to relaxing foam bath preparations. The presence of Flavonoids and amino acids combine too improves peripheral blood circulation and to tighten the skin suggesting functional application in skin cares product. A combination of extract and ethoxylated water-soluble oil is an ideal combination for a novelty foam bath preparation.

for hair care preparation,	5 - 10 %
for bath care products,	< 10%

### **Application codes: RSS, OGS, OGH, NSH, SRB, SPF UV A&B**

SPECIES	Brazil Nut (Bertholletia Excelsa) Syn: Brazil Nut (Bertholletia Excelsa) Bertholletia excelsa HumbBon. (H.B.K.)
PARTS USED	Nuts and flowers
RAW MATERIAL - ORIGIN	SOUTH AMERICA
CONCENTRATION	1.0 kg extract = 1.70 kg brazil nut

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Almost odourless	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.360-1.410	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	-
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml – <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12(97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12(97)
Heavy Metals (Total) As, Pb, Hg	<0.60 ppm (DAB 9 Method A)	USP XXIX / Ph.Eur.2.6.12(97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted from Brazil rainforest environment by Yaomani Indians under contract to a Japanese company established in brazil nut export trade in Sao Paulo since 1985.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9303/CA**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO CARANA HYDRO GLYCOL EXTRACT	
Other Trade Names (CampoResearch):	Carana Extract	
CTFA TRADE NAME (Proposed):	CAMPO CARANA	
Existing CTFA/INCI Name:	Mauritiella armata Burret	
CAMPO PRODUCT #:	9303/CA	
CAS#:	N/A	
EINECS#:	N/A	
EINECS Name:	N/A	
English name:	Carana	
Local name:		
Reference literature:		
Active substances:	Carotenoids	Granulation promoting
	Chlorophyll	Deodorant
	Tannins	Astringent
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	Histamine,	Acetylcholinvasodilatory
	Enzymes™	UV absorber

**Ethnobotany:**

Ethnobotanical studies of the usage of Carana have revealed uses by various tribes as diverse bathing to the treatment of cuts and wounds.

**Applications and dosage recommendations:**

This extract from roots, flowers and nuts of Carana contains an exciting cocktail of active ingredients that can justify incorporation into almost any cosmetics and toiletries formulations. In addition to the circulation stimulating properties of the flavonoids, the astringent action of the tannins and the tightening effect of the amino acids, the extract also contains carotenoids, which promote granulation, histamine, and acetylcholine which are vasodilatory and phytosterols which offer protective care. Carana can be utilized in many cosmetics and toiletry formulations including skin care products, bath care formulations and products for hair care.

For skin care products	2 - 5 %
For hair care preparation,	5 - 10 %
For bath care products,	< 10%



**Application codes: ITS, RTS, RSS**

SPECIES	Mauritiella armata Burret
PARTS USED	Syn: Mauritiella armata Burret
RAW MATERIAL - ORIGIN	Nuts and flowers, Roots
CONCENTRATION	SOUTH AMERICA
	1.0 kg extract = 5.0 kg carana

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Slightly herbal	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.350-1.390	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	3.5 - 4.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	40 - 90%	-
Propylene Glycol	10 - 50%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.60ppm (DAB 9 methodA)	USP XXIX / Ph.Eur.2.6.12 (97)
CS <sub>134</sub> & CS <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted from Brazil rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 129.604**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO CURUCUDA HYDRO GLYCOL EXTRACT	
Other Trade Names (Campo Research):	Itua	
CTFA TRADE NAME (Proposed):	CAMPO CURUCUDA	
Existing CTFA/INCI Name:	Gnetum Amazonicum Tul	
CAMPO PRODUCT #:	129.604	
CAS#:	N/A	
EINECS#:	N/A	
EINECS Name:	N/A	
English name:	Curucuda	
Local name:	Itua - Amerindians of Amazonia/Western culture	
Reference literature:		
Active substances:	Mineral salts	Moisture regulating
	Flavonoids	Circulation stimulating
	Vitamins	Activating, regenerating
	Essential oils	Vitalising
	Amino acids	Tightening
	UVzymes™	UV absorber

**Ethnobotany:**

The nuts of **Curucuda** are roasted and eaten, somewhat similarly to the traditional European sweet chestnut, *Castanea vesca*. The Amerindians also use the nuts as bait in order to catch fruit eating fish of the upper Amazon and its tributaries.

The major remedial use of **Curucuda** is for the toning of the skin prior to ritual tattooing, where the preparation acts as a moisture regulator and skin activator. The amino acids also effectively tighten the skin before the application of the tattoos bearing local tribal designs.

During the dry season, **Curucuda** is pulped and applied in the evening as a facial protection, presumably acting as an effective after sun moisturizer.

**Applications and dosage recommendations:**

With the presence of mineral salts, flavonoids vitamin and amino acids, **Curucuda** is highly effective in day creams and night creams as a moisture regulator and skin activator. Loose dry skin conditioners are known to tighten and regain their natural tone and feel after treatment with Curucuda.

**Curucuda** is also effective as a moisturizer in after-sun preparations, whilst in bath care formulations, the vitalising and activating effects of the flavonoids and vitamins are seen.

For skin care products 3 - 5 %  
 For hair care preparation, 5 - 10 %  
 For bath care products, 5 - 10%

**Application codes: ITS, RSS, SSS, SSB, SPF, UV A&B**

SPECIES Gnetum Amazonicum Tul  
 Syn: Gnetum Amazonicum Tul  
 PARTS USED Nuts  
 RAW MATERIAL - ORIGIN SOUTH AMERICA  
 CONCENTRATION 1.0 kg extract = 1.80 Kg curucuda nuts

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Aromatic	Oil Factory
Specific Gravity (20deg.C)	1.021-1.063	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.355-1.392	USP XXIX / DGF IV C (52)
pH(20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	-
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.15 ppm	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted herb This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT #129.606**

## **SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

### **PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO GINJA HYDRO GLYCOL EXTRACT
Other Trade Names (Campo Research):	SURINAM CHERRY EXTRACT
CTFA TRADE NAME (Proposed):	CAMPO GINJA
Existing CTFA/INCI Name:	Stenocalyx michalii (Lam.) Berg
CAMPO PRODUCT #:	129.606
CAS#	N/A
EINECS#	N/A
EINECS Name:	N/A
English name:	Surinam cherry
Local name:	Pitanga - Brazil
Reference literature:	

Active substances:	Inulin-like molecule	Cell generating
	Mucins	Hydrating
	Phytosterols	Protective cares
	Vitamins	Regenerating
	Essential oils	Anti-inflammatory
	UVzymes™	SPF UV A&B

### **Ethnobotany:**

Originating from Eastern Amazonia, the fruits of the Surinam Cherry are consumed in Brazil either fresh, as a juice, in the form of a jam or a liquor. Amerindians use the juice for the Hispanic blood, use Ginja for the treatment of damaged and tired facial skin.

### **Applications and dosage recommendations:**

For facial skin care, Ginja can be used in creams and lotions designed for the treatment of damaged, tired and inflamed skin. The remedial action is mainly due to the activity of the inulin-like molecule that has been identified in the fruit juice. The essential oils and vitamins are responsible for the action of the juice in ameliorating hair loss and dandruff.

For skin care products	3 - 5 %
For hair care preparation,	5 - 10 %
For bath care products,	5 - 10%

### **Application codes: RTS, RSS, OGS, OGH, DIS, SRB, SPF UV A&B**

SPECIES	Stenocalyx michalii (Lam.) Berg Syn: Stenocalyx michalii (Lam.) Berg
PARTS USED	Fruit
RAW MATERIAL - ORIGIN	SOUTH AMERICA
CONCENTRATION	1.0 kg extract = 3.5 kg Ginja fructus

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Faint characteristic	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.360-1.395	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	3.5 - 4.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	40 - 90%	-
Propylene Glycol	10 - 50%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.10ppm	USP XXIX / Ph.Eur.2.6.12 (97)
CS <sub>134</sub> & CS <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted herb.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9306/HU**

## **SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

### **PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO HUACAVA HYDRO GLYCOL EXTRACT
Other Trade Names (Campo Research):	Huacava Extract
CTFA TRADE NAME (Proposed):	CAMPO HUACAVA
Existing CTFA/INCI Name:	Maximilliana regia Martius
CAMPO PRODUCT #:	9306/HU
CAS#:	N/A
EINECS#:	N/A
EINECS Name:	N/A
English name:	Huacava
Local name:	
Reference literature:	

Active substances:	Essentially oils	Stimulating, invigorating
	Mineral salts	Moisture regulation
	Tannin	Astringent
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	UVzymes™	SPF UV A&B

#### **Ethnobotany:**

Amerindians tribes of Bolivia have utilised the beneficial properties of **Huacava** to treat haematoma, to which they apply the ethnobotanical term, *gintai*. Huacava is also used to expedite the healing of cuts and wounds.

#### **Applications and dosage recommendations:**

This extract from the flowers and nuts of **Huacava** contains a valuable mix of active ingredients. It is particularly rich in flavonoids, but also contains appreciable amounts of mineral salts, amino acids and phytosterols. The ingredients of the extract serve to regulate and activate cells in the epidermis making Huacava a valuable addition to all-skin creams and lotions including day and night creams and moisturising creams and lotions.

For skin care products 2 - 5 %

#### **Application codes: ITS, RTS, RSS, NSH, SRB, SPF UV A&B**

SPECIES	Maximilliana regia Martius Syn: Maximilliana regia Martius
PARTS USED	Nuts and flowers
RAW MATERIAL - ORIGIN	SOUTH AMERICA
CONCENTRATION	1.0 kg extract = 2.0 kg Huacava, flowers and nuts



Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Characteristic, herbal	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.360-1.395	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	3.5 - 4.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	40 - 90%	-
Propylene Glycol	10 - 60%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.60ppm (DAB 9 methodA)	USP XXIX / Ph.Eur.2.6.12 (97)
Cs <sub>134</sub> & Cs <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted from Bolivia's rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH SYSTEMS**

**PRODUCT # 9307/IN**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO INGA HYDRO GLYCOL EXTRACT	
Other Trade Names (Campo Research):	Ice Cream Bean, Vanilla, Swiss vanilla	
CTFA TRADE NAME:	CAMPO INGA	
Existing CTFA/INCI Name:	Inga Edulis	
CAMPO PRODUCT #:	9307/IN	
CAS#:	N/A	
EINECS#:	N/A	
EINECS Name:	N/A	
English name:	Ice Cream Bean	
Local name:	Vanilla, Swiss vanilla	
Reference literature:		
Active substances:	Flavonoids	Circulation stimulating
	procyanidins complex	Circulation stimulant
	Amino acids	Tightening
	Phytosterols	Protective cares
	UVzymes™	SPF UV A&B

**Ethnobotany:**

The Amerindians who have migrated to townships around the Matto Grosso area of Brazil have been known to peddle a lotion containing Inga to the wives of the local gold miners, their mistresses and the local bare maids, ostensibly for the rejuvenation and toning of their facial skin. It is recorded that one of these Amerindians who peddled the Inga Lotion admitted to becoming much richer than the gold miners become!!

**Applications and dosage recommendations:**

Procyanidins and flavonoids are groups of phytochemicals that have noted circulation-stimulating properties which activates and regulate the skin cells and the epidermis. In creams and lotions Inga stimulates the peripheral blood circulation whilst the amino acids provide an accompanying tightening effect.

In bath care and hair care preparations, **Inga** activates and vitalizes the whole organism. In shampoos for dandruff, the activity of the scalp is stimulated and normalized.

For skin care preparations:	2 - 5 %
For bath care preparations:	5 - 10 %
For hair care preparations:	5 - 10 %

**Application codes: ITS, RSS, ADS, DIS, NSH, SSB, SPF UV A&B**

SPECIES	Inga Edulis Syn: Inga Edulis (Inga edulis Mart).
PARTS USED	Beans
RAW MATERIAL - ORIGIN	SOUTH AMERICA

CONCENTRATION 1 kg extract = 10.3 kg. Inga bean

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown	Visual
Odour	Almost odourless	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.365-1.398	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	-
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.01 ppm	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted herb

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH SYSTEMS**

**PRODUCT # 9308/JA**

**SOUTH AMERICAN RAINFOREST BOTANICAL**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research): CAMPO JATOBA HYDRO GLYCOL EXTRACT  
 Other Trade Names (Campo Research): Locust Bean Nut; Algarroba  
 CTFA TRADE NAME: CAMPO JATOBA  
 Existing CTFA/INCI Name: Hymenaea coubaril  
 CAMPO PRODUCT #: 9308/JA  
 CAS#: N/A  
 EINECS#: N/A  
 EINECS Name: N/A  
 English name: Locust Bean Nut  
 Local name: Algarroba - Central America  
 Reference literature:

Active substances:	Amino acids	Tightening
	Saponins	Softening
	Vitamins	Activating, regenerating
	Flavonoids	Circulation stimulating
	Silicic acid	Protection factor
	UVzymes™	SPF UV A&B

**Ethnobotany:**

In the West Indies, amongst the Negro plantation workers, **Jatoba** is used as a facial lotion to prevent drying out of the skin under the fierce heat of the sun. It is also for the protection and care of damaged and very tired skin.

**Applications and dosage recommendations:**

The peculiar silicic acid complex is unique to this Jatoba grown in Matto Grosso (Brazil) and had been shown to improve the resistance of and increase the elasticity of the skin. The remarkable functionality of this unique silicic acid complex has been noted by the Japanese cosmetics manufactures that utilize "Jatoba Matto Grosso" particularly in day and night creams. The functionality of the saponins, flavonoids and amino acids further supports use of Jatoba in almost all-skin care preparations. Jatoba can also be used to some effect in sun care products in accordance with its traditional use in the West Indies.

For skin care preparations: 2 - 10 %

**Application codes: ITS, RTS, RSS, SSS, SRB, SPF UV A & B**

SPECIES	Hymenaea coubaril
PARTS USED	Syn: Hymenaea coubaril (Hymenaceae coubaril L)
RAW MATERIAL - ORIGIN	Pods stem bark
CONCENTRATION	SOUTH AMERICA
	1kg extract = 15.23 kg Jatoba nuts & stem bark

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Lightyellowishbrown	Visual
Odour	Slightly aromatic	OilFactory
Specific Gravity (20deg.C)	1.020-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.410-1.450	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	-
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	<0.005 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.001 ppm	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted herb

This material has not been animal tested for efficiency, bioavailability or therapeutic content

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9309/MA**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research): CAMPO MANGA-ICE HYDRO GLYCOL EXTRACT  
 Other Trade Names (Campo Research): Manga-Jsu Extract  
 CTFA TRADE NAME (Proposed): CAMPO MANGA  
 Existing CTFA/INCI Name: Exchitea glauca Roem & Schultes  
 CAMPO PRODUCT #: 9309/MA  
 CAS#: N/A  
 EINECS#: N/A  
 EINECS Name: N/A  
 English name: Manga-Ice  
 Local name: Manga-Jsu - Paraguay

Reference literature:

Active substances:	Aescin-like molecule	Against circulation disorders
	Mineral salts	Moisture regulating
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Vitamins	Activating, regenerating
	Saponins	Softening
	Phytosterols	Protective cares
	UVzymes™	SPF UV A&B

**Ethnobotany:**

The Tupi tribes of Para and Amapa (North East Brazil) utilise an interesting exorcising ritual of **Manga-Ice** for expelling *Tutuo-Belio*, a demon, which is alleged to cause blochiness of the skin. This condition may actually be ascribed as being due to peripheral circulation disorders. In the ritual exorcising, the patient is laid in mud-pools containing crushed pulp of Manga-Ice, normally on a fine sunny day during the aftermath of the rainy season. It is believed that the comparative cold and dampness caused by the incessant rain during the wet season causes this affliction by slowing down the blood circulation, which is especially prevalent in the more elderly tribes people

**Applications and dosage recommendations:**

**Manga-Ice** is effective in the promotion and stimulation of the peripheral blood circulation, mainly due to the high concentration of the aescin-like molecule found in the nuts and leaves. It is being used in remedial products in Japan. This action is further supported by the action of the flavonoids. The actions of the saponins, amino acids and phytosterols combine to make Manga-Ice an idea product for incorporation into all skin care products. In bath care products, the whole organism is stimulated, with tone and activity of the skin being restored.

For skin care preparations: 3 - 8 %  
 For bath care products < 15 %



**Application codes: ITS, RSS, OGS, OGH, SSB, SPF UV A&B**

SPECIES Exchitea glauca Roem & Schultes  
 Syn: Exchitea glauca Roem & Schultes  
 PARTS USED Nuts and leaves  
 RAW MATERIAL - ORIGIN SOUTH AMERICA  
 CONCENTRATION 1.0 kg extract = 3.63 kg MANGA-ICE

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear light brown	Visual
Odour	Almost odourless	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.350-1.390	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	3.5 - 4.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	40 - 90%	-
Propylene Glycol	10 - 50%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.001 ppm	USP XXIX / Ph.Eur.2.6.12 (97)
CS <sub>134</sub> & CS <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted herb

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9310/MU**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO MURUMURU HYDRO GLYCOL EXTRACT
Other Trade Names (Campo Research):	Murumuru Extract
CTFA TRADE NAME:	CAMPO MURUMURU
Existing CTFA/INCI Name:	Astrocaryum murumuru Mart.
CAMPO PRODUCT #:	9310/MU
CAS#:	N/A
EINECS#:	N/A
EINECS Name:	N/A
English name:	Murumuru
Local name:	
Reference literature:	

Active substances:	Saponins	Softening, cleansing
	Mineral salts	Moisture regulating
	Tannins	Astringent
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Murugenin #	Fungistatic
	UVzymes™	UV absorber
	# Murugenin and UVzymes are proprietary trade names	

**Ethnobotany:**

**Murumuru** is a South American palm, essentially the Amazonian equivalent of the ubiquitous coconut. It similarly serves many functions essential to daily life and the survival of the Amerindians. Bed matting, timber, fishing gear, oils for illumination and cooking, insect repellency, the manufacture of brooms, hunting gear and packaging materials for food and carriage are all provided by various parts of the palm.

The major ethnobotanical use for personal cleansing is of the flowers for cleaning dirty and greasy skin and hair. It is also used for the treatment of various skin conditions.

**Applications and dosage recommendations:**

**Murumuru** exhibits a pronounced vasoconstrictive effect, which is unique for large pored skin. In bath preparations, it can normalise excessive sebaceous secretions and when incorporated into shampoos, greasy hair becomes luxuriant, soft and lustrous after use. Murumuru makes an effective ingredients for all skin creams and lotions for greasy skin conditions for shampoos, rinses and conditioners, particularly for greasy hair and in bath care preparation where it will also ameliorate excessive sebaceous secretions.

For skin care preparations	2 - 5 %
For hair care products	5 - 8 %
For bath care products	< 10 %

**Application codes: RSS, OGH, OGS, NSH, SPF UV A&B**

SPECIES	Astrocaryum murumuru Mart. Syn: Astrocaryum murumuru Mart.
PARTS USED	Flowers
RAW MATERIAL - ORIGIN	SOUTH AMERICA
CONCENTRATION	1.0 kg extract = 1.0 kg murumuru

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown	Visual
Odour	Characteristic, aromatic	OilFactory
Specific Gravity (20deg.C)	1.010-1.090	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.356-1.395	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	3.5 – 4.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	40 - 90%	-
Propylene Glycol	10 - 50%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 – 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.60 ppm	USP XXIX / Ph.Eur.2.6.12 (97)

**Comments:**

100% organically cultivated in cleared rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 129.611**

## **SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACT**

### **PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO MURUITY-MURUITY HYDRO GLYCOL EXTRACT	
Other Trade Names (Campo Research):	MURUITY-MURUITY	
CTFA TRADE NAME:	CAMPO MURUITY-MURUITY	
Existing CTFA/INCI Name:	Mauritia Flexuosa	
CAMPO PRODUCT #:	129.611	
CAS#:	N/A	
EINECS#:	N/A	
EINECS Name:	N/A	
English name:	Muruity-muruity	
Local name:		
Reference literature:		
Active substances:	Chlorophyll	Deodorant
	Saponins	Softening, cleansing
	Tannins	Astringent
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	A lupulon-like compound	Actericidal
	A hederagenin-like compound	Fungistatic
	UVzymes™	SPF UV A&B

### **Ethnobotany:**

**Muruity-muruity** is a South American rainforest palm of which the Amerindians of Venezuela use the flowers and nuts in ritual bathing ceremonies to exorcise the spirits *Guzo-tee*, which are believed to accumulate on the skin and hair during long hunting trips into the rainforest interior.

### **Applications and dosage recommendations:**

**Muruity-muruity** contains substantially levels of saponins that have a cleansing and softening effect on the skin and hair. Additionally, it has been shown to contain specific bacteristatic and fungistatic compounds, similar in structure to hederagenin and lupulon, which are isolated from the hop, *humulus lupulus*. The extract is also rich in tannins, amino acids and flavonoids together with considerably concentrations of chlorophyll that is an effective natural deodorant. This mix of ingredients certainly supports the ethnobotanical use of Muruity-muruity and it is particularly recommend for incorporation into all bath care products. Use in hair care products is also suggested where the presence of Saponins cleanses and softens the hair.

For hair care products	5 - 8 %
For bath care products	< 10 %

**Application Codes: ITS, RTS, SRS, OGH , NSH, SPF UV A&B**

SPECIES	Mauritia Flexuosa
PARTS USED	Syn: Mauritia Flexuosa (Mauritia flexuosa L.f.)
RAW MATERIAL - ORIGIN	Flowers & nuts
CONCENTRATION	SOUTH AMERICA
	1 kg extract = 1.0 kg muruity-muruity

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, brown	Visual
Odour	Characteristic,aromatic	OilFactory
Specific Gravity (20deg.C)	1.035-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.365-1.398	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	3.5 - 4.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	10-50%	-
Propylene Glycol	40-90%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
	<b>Non-Pathogenic</b>	
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.60 ppm (DAB 9 method A)	USP XXIX / Ph.Eur.2.6.12 (97)
CS <sub>134</sub> & CS <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted from Venezuela's rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 129.609**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACT**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research): CAMPO PEJIBAYE HYDRO GLYCOL EXTRACT  
 Other Trade Names (Campo Research): Pejibaye Extract  
 CTFA TRADE NAME: CAMPO PEJIBAYE  
 Existing CTFA/INCI Name: Bactris gasipaes Kunth  
 CAMPO PRODUCT #: 129.609  
 CAS#: N/A  
 EINECS#: N/A  
 EINECS Name: N/A  
 English name: Pejibaye  
 Local name:  
 Reference literature:

Active substances:	Saponins	Softening, cleansing
	Mineral salts	Moisture regulating
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	UVzymes™	UV absorber

**Ethnobotany:**

The **Pejibaye** palm is important locally for dietary and other uses. The nomadic tribes of Western Amazonia are known to travel long distances to abandoned settlements in order to harvest pejibaye in season.

It has been traditionally used for its skin softening and sun blocking properties.

**Applications and dosage recommendations:**

The extract of **Pejibaye** is rich in saponins, mineral salts, flavonoids and amino acids which make it a particularly valuable ingredients for skin care creams and lotions, especially moisturizers, cleansers and anti-wrinkle preparations. It is also recommended for shampoos and conditioners particularly for dry hair.

The oil from pejibaye fruit exhibits superior skin softening properties. It is recommended for use in all hydrous and anhydrous skin creams, body lotions and bath oils. It is non-comedogenic and aids moisturizing without imparting any unwanted greasy feel.

For skin care preparations	2 - 5 %
For hair care products	5 - 8 %
For bath care products	< 10 %

**Application code: ITS, OGH, SSB, SPF UV A&B**

Bactris gasipaes Kunth

SPECIES	Syn: Bactris gasipaes Kunth
PARTS USED	Fruit
RAW MATERIAL - ORIGIN	SOUTH AMERICA
CONCENTRATION	1.0 kg extract = 1.1 kg pejibaye, fruit

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Odourless	OilFactory
Specific Gravity (20deg.C)	1.000-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.356-1.392	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-5.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	40 - 90%	
Propylene Glycol	10 - 50%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal1989
Total Germs	<100 CfU/ml - <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.60 ppm (DAB 9 method A)	USP XXIX / Ph.Eur.2.6.12 (97)
CS <sub>134</sub> & CS <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted from Brazil's rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 140.353**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research): CAMPO PURUF-GRANDE HYDRO GLYCOL EXTRACT

Other Trade Names (Campo Research): PURUF GRANDE

CTFA TRADE NAME: CAMPO PURUF-GRANDE

Existing CTFA/INCI Name: Borojoa sorbilis (Huer) Cuatrec

CAMPO PRODUCT #: 140.353

CAS#: N/A

EINECS#: N/A

EINECS Name: N/A

English name: Puruf-Grande

Local name:

Reference literature:

Active substances:	Anthraglycosides	UVadsorption, sun protection
	Saponins	Softening, cleansing
	Carotenoids	Granulation promoting
	Cinnamic acid	UV adsorption derivatives
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	Mucins	Hydrating
	UVzymes™	UV absorber

**Ethnobotany:**

**Puruf-Grande** is an isolated species indigenous to the Southwest Amazon basin where it probably originated. It is confined to the watersheds of the Madeira, Purus, Juruá, Javari and the upper Amazon between Madiera and Peru.

A paste of the flowers and fruit is used to smear on the naked bodies of the Amerindians prior to embarking on long distance canoe journeys on the Amazon and its tributaries, where it offers protection from the effects of the fierce sun, which shines strongly through the broken forest canopy along the riverbank.

**Applications and dosage recommendations:**

**Puruf-Grande** is already a well-accepted cosmetic ingredient in Japanese pre-sun and after-sun products designed for use by overseas workers based in Tropics and the Middle East. It is widely used in such preparations where use is made of the natural UV adsorbing characteristics of the cinnamate esters and anthraglycosides in conjunction with the hydrating and moisture regulating properties of the mucins. Puruf-Grande flowers and fruit extract is recommended for use in all sun care products.

For sun care products, 3 - 5 %



**Application codes: SSS, SPF UV A & B**

SPECIES	Borojoa sorbilis (Huer) Cuatrec
PARTS USED	Syn: Borojoa sorbilis (Huer) Cuatrec
RAW MATERIAL - ORIGIN	Flowers and fruit
CONCENTRATION	SOUTH AMERICA
	1.0 kg extract = 0.90 kg puruf grande

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light yellowish brown	Visual
Odour	Odourless	OilFactory
Specific Gravity (20deg.C)	1.030-1.080	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.356-1.392	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-5.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	20 - 40%	-
Propylene Glycol	50 - 90%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
	<b>Non-Pathogenic</b>	
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.60 ppm (DAB 9 method A)	USP XXIX / Ph.Eur.2.6.12 (97)
CS <sub>134</sub> & CS <sub>137</sub>	< 600 Bq/kg	-

**Comments:**

100% wildcrafted herb

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9315/SBG**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research):	CAMPO SUMA BRAZILIAN HYDRO GLYCOL GINSENG
Other Trade Names (Campo Research):	Suma Extract
CTFA TRADE NAME:	CAMPO SUMA BRAZILIAN
Existing CTFA/INCI Name:	Pfaffia spp.
CAMPO PRODUCT #:	9315/SBG
CAS#:	N/A
EINECS#:	N/A
EINECS Name:	N/A
English name:	Suma
Local name:	
Reference literature:	

Active substances:	Saponins	Softening, cleansing
	Mineral salts	Moisture regulating
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	Novel norterpenoid cp.	Rejuvenator
	UVzymes™	UV absorber

**Ethnobotany:**

**Suma** is a unique South American plant that possesses similar adaptogenic properties to Oriental ginseng, *Panax ginseng* Meyer, and American ginseng, *Panax quinquefolia*. Interestingly, most Western ethnobotanical studies and literature ignore this plant, but it has been well known in Japan for 125 years where its existence and properties have been well documented.

Local Amerindians in Brazil have used aqueous decoctions of the roots for the treatment of a condition known as "*wind adsorption through the skin*" which would translate into 20th century terminology as adverse peripheral blood circulation of the skin.

**Applications and dosage recommendations:**

**Suma** has been shown to contain a novel norterpenoid compound which has shown outstanding ability to promote and stimulate peripheral blood circulation and the regeneration of cells. Currently, this novel compound and its related structures are being isolated and screened as potential therapeutic for their anti-nepotistic activity. In addition, Suma is rich in softening saponins, tightening amino acids and protecting phytosterols.

**Suma** is particularly recommended for skin care products, night creams, moisturising creams etc, and can also be effective when added to bath care formulations.

For skin care preparations: 2 - 5 %  
 For hair care preparations: 5 - 8 %  
 For bath care products < 10%

**Application codes: RSS, OGS, OGH, SSB, SPF UV A & B**

SPECIES Pfaffia spp.  
 Syn: Pfaffia spp.  
 PARTS USED Roots  
 RAW MATERIAL - ORIGIN SOUTH AMERICA  
 CONCENTRATION 1.0 kg extract = 1.5kg suma

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Odourless	OilFactory
Specific Gravity (20deg.C)	1.010-1.060	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.360-1.380	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml – <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.60 ppm (DAB 9 method A)	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% originally cultivated in cleared rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9316/TU**

**SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

**PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research): CAMPO TUCUMA HYDRO GLYCOL EXTRACT  
 Other Trade Names (Campo Research): Tucuma Extract  
 CTFA TRADE NAME: CAMPO TUCUMA  
 Existing CTFA/INCI Name: Astrocaryum tucuma Mart.  
 CAMPO PRODUCT #: 9316/TU  
 CAS#: N/A  
 EINECS#: N/A  
 EINECS Name: N/A  
 English name: Tucuma

Local name:

Reference literature:

Active substances:	Saponins	Softening, cleansing
	Mineral salts	Moisture regulating
	Tannins	Astringent
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	UVzymes™	UV absorber

**Ethnobotany:**

**Tucuma** is a South American palm from the same family as Murumuru and which shares many similar characteristics to the coconut palm, to which it is related. Not surprisingly, various parts of the palm serve a multitude of uses in the daily lives of the local Amerindians. In terms of personal care, the flowers have traditionally been used for topical skin applications and for cleaning dirty and greasy hair.

**Applications and dosage recommendations:**

The tannins in the extract exert a pronounced vasoconstrictive action effectively closing large skin pores. Further skin tightening is affected by the action of the amino acids. Tucuma is particularly recommended in creams and lotions designed to combat greasy skin conditions.

**Tucuma** also serves to normalise greasy hair and acts as an excellent conditioner and protective agent for hair. It is used in shampoos leaves the hair luxuriously soft and lustrous.

In bath preparations, the tannins and amino acids again combine to normalise excessive sebaceous secretions.

For skin care preparations:	2 - 5 %
For hair care preparations:	5 - 8 %
For bath care products	< 10%

**Application codes: RSS, ITS, OGH, OGS, RTS, SPF U A&B**

SPECIES	Astrocaryum tucuma Mart. Syn: Astrocaryum tucuma Mart.
PARTS USED	Flowers
RAW MATERIAL - ORIGIN	SOUTH AMERICA
CONCENTRATION	1.0 kg extract = 1.9 Kg tucuma,flowers

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Light brown	Visual
Odour	Odourless	OilFactory
Specific Gravity (20deg.C)	1.030-1.080	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.350-1.390	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-5.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	15-30%	
Propylene Glycol	50-90%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	None	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml – <b>Non-Pathogenic</b>	USP XXIX / Ph.Eur.2.6.12 (97)
Total Yeast/Mold	<100 CfU/ml	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	<0.60 ppm (DAB 9 method A)	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted from Brazil's rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST HERB EXTRACTS

**CAMPO RESEARCH**

**PRODUCT # 9317/YC**

## **SOUTH AMERICAN RAINFOREST BOTANICAL EXTRACTS**

### **PRODUCT TECHNICAL DATA SHEET**

PRODUCT Name (Campo Research): CAMPO YUYU CHONTA HYDRO GLYCOL EXTRACT  
 Other Trade Names (Campo Research): Yuyu Chonta Extract  
 CTFA TRADE NAME: CAMPO YUYU CHONTA  
 Existing CTFA/INCI Name: Euterpe precatoria Martius (Palmae)  
 CAMPO PRODUCT #: 9317/YC  
 CAS#: N/A  
 EINECS#: N/A  
 EINECS Name: N/A  
 English name: Yuyu Chonta  
 Local name:  
 Reference literature:

Active substances:	Essential oils	Stimulating, invigorating
	Mineral salts	Moisture regulating
	Tannins	Astringent
	Amino acids	Tightening
	Flavonoids	Circulation stimulating
	Phytosterols	Protective cares
	UVzymes™	UV absorber

### **Ethnobotany:**

**Yuyu Chonta** is a native South American plant that the Amerindians have utilised for the treatment of slow healing cuts and wounds. Peruvian tribes for the treatment of talruit have also used it, the local ethnobotanical term for rheumatism.

### **Applications and dosage recommendations:**

An extract of **Yuyu Chonta** flowers and nuts contains stimulating and invigorating essential oils together with tannins, flavonoids, amino acids, phytosterols and mineral salts. All of these combines to give a product that is ideal for incorporation into bath care products where the invigorating effects of the essential oils act as a foil for the generally soothing characteristics of the other ingredients.

For bath care products < 10%

**Application codes: ITS, RTS, RSS, SRS, NSH, SPF UV A & B**

SPECIES Euterpe precatoria Martius (Palmae)  
 Syn: Euterpe precatoria Martius  
 PARTS USED Flowers and nuts  
 RAW MATERIAL - ORIGIN SOUTH AMERICA  
 CONCENTRATION 1.0 kg extract = 1.0kg Yuyu Chonta

Specification Parameter Analysis	Specification Range	Methods
Physical Form	Liquid	Visual
Colour	Clear, light brown	Visual
Odour	Slightly herbal	OilFactory
Specific Gravity (20deg.C)	1.010-1.080	USP XXIX / Paar, DMA35
Refractive Index (20deg.C)	1.360-1.380	USP XXIX / DGF IV C (52)
pH (20°C) (100% Concentrate)	4.5-6.5	USP XXIX / DGF H III (92)
<b>Carrier Menstrual (Vehicle)</b>		
Water	55.5 - 85.5 %	-
Propylene Glycol	25.5 - 50.5%	-
Water Solubility	Soluble	-
Saponification Value	-	-
Viscosity	-	-
Dry Residue (160deg.C /2hrs)	1 - 15 %	Mettler 16J
Preservation	None	-
Pesticide Content	<0.005 ppm	Pflanzaniaschuttal 1989
Total Germs	<100 CfU/ml –	USP XXIX / Ph.Eur.2.6.12 (97)
	<b>Non-Pathogenic</b>	
Total Yeast/Mold	<100 CfU/ml (DAB 9 method A)	USP XXIX / Ph.Eur.2.6.12 (97)
Heavy Metals (Total) As, Pb, Hg	< 0.60 ppm	USP XXIX / Ph.Eur.2.6.12 (97)
Cs134 & Cs137	<600 Bq/kg	-

**Comments:**

100% wildcrafted from Brazil's rainforest environment.

This material has not been animal tested for efficiency, bioavailability or therapeutic content.

External use only.  
**NOT FOR DRUG USE.**

# RAINFOREST EXOTIC OILS



### **On Custom - Request:**

CAMPO Custom Extraction Service for new  
Novel Exotic Rainforest Botanicals for Novel Cosmetics.  
**Contact Tel: (65) 63833203 Fax: (65) 63834034**

#### **Latest Up-date:**

The latest molecular knowledge of UV protection mechanism of plants from the tremendous amount of Solar UV rays is now better understood and the functional active principle(s) “Enzymes” involved (trade name: ‘UVzymes™’) is meticulously isolated, extracted and incorporated in all of Campo’s range of Plant Extracts including this range of Amazonian Rainforest Exotic Botanical Extracts & Amazonian Rainforest Exotic Oils.

**Campo Research, Singapore.**



## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT #9302BO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: BRAZIL NUT OIL  
 Latin name: Bertholletia excelsa Humb-Bon (H.B.K.)  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used: Mature nuts  
 Literature:  
 Application codes: ITS, RSS, ADS, SSS, SRB, SPF UV A & B  
 Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	Trace
Capric	10	0	Trace
Lauric	12	0	
Myristic	12	0	Trace
Palmitic	16	0	Trace
Stearic	18	0	6.90
Arachidic	20	0	1.80

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	1.01
Oleic	18	1	70.05
Linoleic	18	2	Trace
Linolenic	18	3	

**Typical analysis contd.:**

Extraction medium/process: Cold pressed  
 Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 90 - 100  
 Saponification value: 180 - 195  
 Refractive index @ 20°C USP XXIX / DGF IV C (52)

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT #9301CA0**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: CARANA OIL  
 Latin name: Mauritiella armata (Martius) Burret  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used: Mature nuts  
 Literature:  
 Application codes: ITS, RSS, ADS, SSS, DBH, NSH, SRB, SPF UV A & B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	Trace
Capric	10	0	Trace
Lauric	12	0	Trace
Myristic	14	0	0.92
Palmitic	16	0	9.04
Stearic	18	0	2.86
Arachidic	20	0	2.92

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	23.09
Oleic	18	1	60.70
Linoleic	18	2	2.90
Linolenic	18	3	4.03

**Typical analysis contd.:**

Extraction medium/process: Cold pressed  
 Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 75 – 83  
 Saponification value: 195 – 201  
 Refractive index @ 20°C: 1.468 – 1.474

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT #9305HCO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: HUACAVA OIL  
 Latin name: Maximilliana regia Martius  
 Botanical synonym:  
 English name: Huacava oil  
 Local name:  
 Plant parts used: Fruit kernel  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DBH, NSH, SRB, SPF UV A&B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	Trace
Capric	10	0	Trace
Lauric	12	0	
Myristic	14	0	Trace
Palmitic	16	0	13.10
Stearic	18	0	3.90
Arachidic	20	0	2.67

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	32.09
Oleic	18	1	60.00
Linoleic	18	2	Trace
Linolenic	18	3	Trace

**Typical analysis contd.:**

Extraction medium/process: Cold pressed

Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 10 – 23  
 Saponification value: 240 – 268  
 Refractive index @ 20°C: 1.440 – 1.450

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT #9309MPO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: MONKEY POT NUT OIL  
 Latin name: Lecythis usita Miers  
 Botanical synonym:  
 English name: Cream Nut Oil  
 Local name: Sapucaia Oil (Brazil)  
 Plant parts used: Fruit kernel  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DIS, NSH, SRB, SPF  
 UV A&B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	Trace
Capric	10	0	Trace
Lauric	12	0	
Myristic	14	0	
Palmitic	16	0	5.00
Stearic	18	0	0.33
Arachidic	20	0	Trace

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	4.00
Oleic	18	1	20.01
Linoleic	18	2	45.00
Linolenic	18	3	30.00

**Typical analysis contd.:**

Extraction medium/process: Cold pressed

Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 150 – 180  
 Saponification value: 180 – 195  
 Refractive index @ 20°C: 1.465 – 1.467

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT 9303MUO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: MURUITY-MURUITY OIL  
 Latin name: Mauritia flexosa L.f.  
 Botanical synonym:  
 English name: Rainforest Mink Tree Oil  
 Local name: Sapucaia Oil (Brazil)  
 Plant parts used: Fruit kernel  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DBH, NSH, SRB SPF  
 UV A&B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	Trace
Capric	10	0	Trace
Lauric	12	0	Trace
Myristic	14	0	4.60
Palmitic	16	0	20.50
Stearic	18	0	5.90
Arachidic	20	0	Trace

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	21.45
Oleic	18	1	50.67
Linoleic	18	2	15.43
Linolenic	18	3	Trace

**Typical analysis contd.:**

Extraction medium/process: Hexane  
 Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 65 – 73  
 Saponification value: 193 – 205  
 Refractive index @ 20°C: 1.466 – 1.469

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT # 9304MO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: MURUMURU OIL  
 Latin name: *Astrocaryum murumuru* Mart.  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used: Fruit  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DBH, NSH, SRB, SPF UV A&B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	1.56
Capric	10	0	7.03
Lauric	12	0	33.90
Myristic	14	0	18.00
Palmitic	16	0	10.80
Stearic	18	0	3.06
Arachidic	20	0	Trace

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	Trace
Oleic	18	1	6.03
Linoleic	18	2	4.90
Linolenic	18	3	Trace

**Typical analysis contd.:**

Extraction medium/process: Cold pressed  
 Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 5 – 23  
 Saponification value: 225 – 250  
 Refractive index @ 20°C: 1.449 – 1.452

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## RAINFOREST EXOTIC OILS

**CAMPO RESEARCH**

**PRODUCT #9308PBO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: PALMCHI BRASILERA OIL  
 Latin name: Corozo oleifera (Kunth.) Bailey  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used: Fruit kernel  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DIS, NSH, SRB, SPF  
 UV A & B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	
Capric	10	0	
Lauric	12	0	
Myristic	14	0	0.95
Palmitic	16	0	50.00
Stearic	18	0	3.30
Arachidic	20	0	

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	1.00
Oleic	18	1	44.10
Linoleic	18	2	12.00
Linolenic	18	3	Trace

**Typical analysis contd.:**

Extraction medium/process: Cold pressed

Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 86 – 100  
 Saponification value: 192 – 202  
 Refractive index @ 20°C: 1.450 – 1.456

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT #9307PEO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: PEJIBAYE OIL  
 Latin name: *Bactris gasipaes* Kunth  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used: Fruit kernel  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DIS, NSH, SRB, SPF  
 UV A&B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	
Capric	10	0	Trace
Lauric	12	0	Trace
Myristic	14	0	0.95
Palmitic	16	0	13.00
Stearic	18	0	3.30
Arachidic	20	0	Trace

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	5.04
Oleic	18	1	41.00
Linoleic	18	2	12.00
Linolenic	18	3	7.00

**Typical analysis contd.:**

Extraction medium/process: Cold pressed

Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 85 – 90  
 Saponification value: 188 – 199  
 Refractive index @ 20°C: 1.466 – 1.473

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.



## RAINFOREST EXOTIC OILS

**CAMPO RESEARCH**

**PRODUCT # 9306TU0**

**SOUTH American RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### PRODUCT TECHNICAL DATA SHEET

Product name: TUCUMA OIL  
 Latin name: *Astrocaryum tucuma* Mart.  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used:  
 Literature:  
 Application codes: ITS, RSS, RTS, ADS, DIS, NSH, SRB, SPF  
 UV A&B

Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	Trace
Capric	10	0	Trace
Lauric	12	0	Trace
Myristic	14	0	Trace
Palmitic	16	0	12.00
Stearic	18	0	15.00
Arachidic	20	0	1.90

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	10.00
Oleic	18	1	31.00
Linoleic	18	2	15.00
Linolenic	18	3	7.00

**Typical analysis contd.:**

Extraction medium/process: Cold pressed  
 Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 96 – 110  
 Saponification value: 165 – 175  
 Refractive index @ 20°C: 1.443 – 1.450

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

## **RAINFOREST EXOTIC OILS**

**CAMPO RESEARCH**

**PRODUCT # 9302URO**

**SOUTH AMERICAN RAINFOREST EXOTIC OILS FOR COSMETICS & TOILETRIES**

### **PRODUCT TECHNICAL DATA SHEET**

Product name: URUCUM OIL  
 Latin name: Antrocaryon amazonicum (Ducke) Burtt  
 Botanical synonym:  
 English name:  
 Local name:  
 Plant parts used: Matured nuts  
 Literature:  
 Application codes: ITS, RSS, ADS, SSS, SRB, SPF UV A & B  
 Typical analysis:

**Content of saturated fatty acids:**

	<b>C-</b>	<b>C=C</b>	<b>%</b>
Caprylic	8	0	
Capric	10	0	
Lauric	12	0	
Myristic	14	0	Trace
Palmitic	16	0	2.70
Stearic	18	0	1.40
Arachidic	20	0	0.30

**Content of unsaturated fatty acids:**

Palmitoleic	16	1	1.00
Oleic	18	1	20.06
Linoleic	18	2	50.40
Linolenic	18	3	10.40

**Typical analysis contd.:**

Extraction medium/process: Cold pressed  
 Appearance: Clear liquid  
 Odour: Slight  
 Iodine value: 120 – 130  
 Saponification value: 180 – 195  
 Refractive index @ 20°C: 1.474 – 1.476

**Comments:**

- a. The above analytical data represents typical values; it is not intended to constitute a purchasing specification.
- b. The analytical data may vary from batch to batch due to local climatic conditions and collecting areas.
- c. The oil is totally produced from wild crafted nuts from the Amazon rainforest.

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